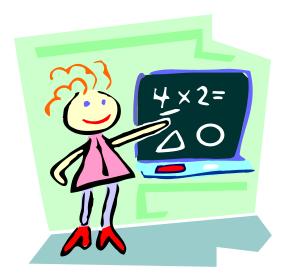
Kansas Classroom

Handbook of



Communicable Diseases

Update: September 2004





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diseases which are of public health importance. These diverse diseases include childhood vaccine preventable diseases such as measles to gastrointestinal diseases which can be transmitted by contaminated food or from person-to-person.

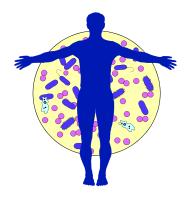
There are two main sections in this handbook. The first section includes statutes and regulations related to communicable diseases that school nurses may need to refer to. The second section is disease-specific, with diseases listed alphabetically and containing key information on symptoms, modes of transmission, and measures of control.

This handbook is authored and provided by the Epidemiologic Services section, Bureau of Epidemiology and Disease Prevention, Kansas Department of Health and Environment (KDHE). Further copies are available on the Internet at the KDHE homepage (address: www.kdhe.state.ks.us/epi).

For further information on communicable diseases and their control, school nurses can call their county health department or KDHE (785/296-2951).









REPORTING INFECTIOUS DISEASES

- K.S.A. 65-118. Reporting to local health authority as to infectious or contagious diseases; persons reporting; immunity from liability; confidentiality of information; disclosure.
- (a) Whenever any person licensed to practice the healing arts or engaged in a postgraduate training program approved by the state board of healing arts, licensed dentist, physician's assistant whose name has been entered on the register of physician's assistants by the state board of healing arts, licensed professional nurse, licensed practical nurse, administrator of a hospital, licensed adult care home administrator, licensed social worker, teacher or school administrator knows or has information indicating that a person is suffering from or has died from a reportable infectious or contagious disease as defined in the rules and regulations, such knowledge or information shall be reported immediately to the county or joint board of health or the local health officer, together with the name and address of the person who has or is suspected of having the infectious or contagious disease, or the name and former address of the deceased individual who had or was suspected of having such a disease. In the case of a licensed hospital or adult care home, the administrator may designate an individual to receive and make such reports. The secretary of health and environment shall, through rules and regulations, make provision for the consolidation of reports required to be made under this section when the person required to make the report is working in a licensed hospital or adult care home. Laboratories certified under the federal clinical laboratories improvement act pursuant to 42 code of federal regulations, 493 shall report the results of microbiologic cultures, examinations, immunologic esssays for the presence of antigens and antibodies and any other laboratory tests which are indicative of the presence of a reportable infectious or contagious disease to the department of health and environment. The director of the division of health may use information from death certificates for disease investigation purposes.
- (b) Any person who is an individual member of a class of persons designated under subsection (a) of this section and who reports the information required to be reported under such subsection in good faith and without malice to a county or joint board of health, a local health officer, or the department of health and environment shall have immunity from any liability, civil or criminal, that might otherwise be incurred or imposed in an action resulting from such report. Any such person shall have the same immunity with respect to participation in any judicial proceeding resulting from such report.
- (c) Information required to be reported under subsection (a) of this section shall be confidential and shall not be disclosed or made public, upon subpoena or otherwise, beyond the requirements of subsection (a) of this section or subsection (a) of K.S.A. 65-119, except such information may be disclosed:
- (1) If no person can be identified in the information to be disclosed and the disclosure is for statistical purposes;
- (2) if all persons who are identifiable in the information to be disclosed consent in writing to its disclosure;
- (3) if the disclosure is necessary, and only to the extent necessary, to protect the public health;
- (4) if a medical emergency exists and the disclosure is to medical personnel qualified to treat infectious or contagious diseases. Any information disclosed pursuant to this paragraph shall be disclosed only to the extent necessary to protect the health or life of a named party; or
- (5) if the information to be disclosed is required in a court proceeding involving child abuse and the information is disclosed in camera.



History: L. 1901, ch. 285, 2; R.S. 1923, 65-118; L. 1953, ch. 283, 1; L. 1976, ch. 262, 1; L. 1979, ch. 189, 1; July 1; amended April 9, 1998.

2004 REPORTABLE DISEASES IN KANSAS for health care providers, hospitals, and laboratories (K.S.A. 65-118, 65-128, 65-6001 through 65-6007, K.A.R. 28-1-2, 28-1-4, and 28-1-18)

Bold --Telephone report within four hours of <u>suspect or confirmed</u> cases to KDHE toll free at 1-877-427-7317.

① Isolates must be sent to:

Division of Health and Environmental Laboratories Forbes Field, Building #740, Topeka, KS 66620-0001

Phone: (785) 296-1636

™ DISEASES REQUIRING SPECIAL ATTENTION

Anthrax 🕾 **Rubella**, including congenital rubella syndrome 🕾 Botulism 🕾 Severe Acute Respiratory Syndrome (SARS) 1 2 Cholera 🕾 Smallpox 🕾 Tuberculosis, active disease (1) 🕾 Measles (rubeola) 🕾 *Meningitis*, bacterial ? Viral hemorrhagic fever 🕾 Meningococcemia (1) 222 Escherichia coli O157:H7 Mumps 22 (and other enterohemorrhagic, enteropathogenic and Pertussis (whooping cough) 🕾 enteroinvasive E. coli) ① Plague 🕾 Salmonellosis, including typhoid fever ① Poliomyelitis 🕾 Shigellosis (1) Streptococcal invasive disease, Group A from Q Fever 🕾 Streptococcus or Streptococcus pneumoniae ① Rabies, human and animal 🕾

Acquired Immune Deficiency Syndrome (AIDS)

Amebiasis

Anthrax
Botulism

Brucellosis

Campylobacter infections

Chancroid

Chlamydia trachomatis genital infection

Cholera ≅ Cryptosporidiosis Cyclospora infection Diphtheria Ehrlichiosis

Encephalitis, infectious (includes West Nile virus)

Escherichia coli O157:H7

(and other enterohemorrhagic, enteropathogenic and

enteroinvasive E. coli) ①

Giardiasis Gonorrhea

Haemophilus influenza, invasive disease Hantavirus Pulmonary Syndrome Hemolytic uremic syndrome, postdiarrheal Hepatitis, viral (acute and chronic)

Hepatitis B during pregnancy

Human Immunodeficiency Virus (HIV) (includes Viral

Load Tests) Legionellosis

Leprosy (Hansen disease)

Listeriosis Lyme disease Malaria

Measles (rubeola) 🕾

Meningitis, arboviral (includes West Nile virus)

Mumps 🕾

Pertussis (whooping cough) 🕾

Plague Poliomyelitis Posittacosis
Q Fever Posittacosis

Rabies, human and animal ™ Rocky Mountain Spotted Fever

Rubella, including congenital rubella syndrome ≅ Salmonellosis, including typhoid fever ①

Severe Acute Respiratory Syndrome (SARS) ① 🕾

Streptococcal invasive disease, Group A from *Streptococcus* or *Streptococcus pneumoniae* ①

Syphilis, including congenital syphilis

Tetanus

Toxic shock syndrome, streptococcal and staphylococcal

Trichinosis

Tuberculosis, active disease ① [™] Tuberculosis, latent infection

Tularemia

Varicella (chickenpox)

Viral hemorrhagic fever

Yellow fever

In addition, laboratories <u>must</u> report:

- Viral load results of reportable diseases
- ALL blood lead levels, as of 12/2002 (KCLPPP/ABLES)
- CD4+ T-lymphocyte count < 500/ μl or CD4+ T-lymphocytes <29% of total lymphocytes

Outbreaks, unusual occurrence of any disease, exotic or newly recognized diseases, and suspect acts of terrorism should be reported within 4 hours by telephone to the Epidemiology Hotline: 1-877-427-7317

Outbreaks or unusual occurrence of any disease are also reportable, and suspected or confirmed infections in bold type should be reported immediately by telephone to your local or state health department.

EXCLUSION FROM SCHOOL AND CHILD CARE FACILITIES

K.S.A. 65-122. Schools and child care facilities; non-admissions and exclusions; readmissions, when.

No person afflicted with an infectious or contagious disease dangerous to the public health shall be admitted into any public, parochial or private school or licensed child care facility. It shall be the duty of the parent or guardian, and the principal or other person in charge of any public, parochial, private school or licensed child care facility to exclude therefrom any child or other person affected with a disease suspected of being infectious or contagious until the expiration of the prescribed period of isolation or quarantine for the particular infectious or contagious disease. If the attending person licensed to practice medicine and surgery or local health officer finds upon examination that the person affected with a disease, suspected of being infectious or contagious is not suffering from an infectious or contagious disease, he or she may submit a certificate to this effect to the person in charge of the public, parochial, private school or licensed child care facility and such person shall be readmitted to school or to the child care facility.

History: L. 1901, ch. 285, 6; R.S. 1923, 65-122; L. 1953, ch. 283, 3; L. 1976, ch. 262, 3; July



1.









DEFINITIONS FOR IMMUNIZATIONS STATUTES

K.S.A. 72-5208. Health tests and inoculations; definitions.

As used in this act:

- (a) "School Board" means the board of education of a school district and the governing authority of any nonpublic school;
 - (b) "school" means all elementary, junior high or high schools within the state;
- (c) "local health department" means any county or joint board of health established under the laws of Kansas and having jurisdiction over the place where any pupil affected by this act may reside;
 - (d) "secretary means the secretary of the state department of health and environment;
 - (e) "physician" means a person licensed to practice medicine and surgery.

History: L. 1961, ch. 354, 1; L. 1978, ch. 291, 1; July 1.



CERTIFICATION OF IMMUNIZATIONS

K.S.A. 72-5209. Health tests and inoculations; certification of completion required, alternatives; duties of school boards.

- (a) In each school year, every pupil enrolling or enrolled in any school for the first time in this state, and each child enrolling or enrolled for the first time in a preschool or day care program operated by a school, and such other pupils as may be designated by the secretary, prior to admission to and attendance at school, shall present to the appropriate school board certification from a physician or local health department that the pupil has received such tests and inoculations as are deemed necessary by the secretary by such means as are approved by the secretary. Pupils who have not completed the required inoculations may enroll or remain enrolled while completing the required inoculations if a physician or local health department certifies that the pupil has received the most recent appropriate inoculations in all required series. Failure to timely complete all required series shall be deemed non-compliance.
- (b) As an alternative to the certification required under subsection (a), a pupil shall present:
- (1) An annual written statement signed by a licensed physician stating the physical condition of the child to be such that the tests or inoculations would seriously endanger the life or health of the child, or
- (2) a written statement signed by one parent or guardian that the child is an adherent of a religious denomination whose religious teachings are opposed to such tests or inoculations.
- (c) On or before May 15 of each school year, the school board of every school affected by this act shall notify the parents or guardians of all known pupils who are enrolled or who will be enrolling in the school of the provisions this act and any policy regarding the implementation of the provisions of this act adopted by the school board.
- (d) If a pupil transfers from one school to another, the school from which the pupil transfers shall forward with the pupil's transcript the certification or statement showing evidence of compliance with the requirements of this act to the school to which the pupil transfers.

History: L. 1961, ch. 354, 2; L. 1965, ch. 412, 1; L. 1970, ch. 283, 1; L. 1975, ch. 462, 107; L. 1978, ch. 291, 2; L. 1981, ch. 285, 1; L. 1993, ch. 89, 1; L. 1994, ch. 206, 1; July 1.



IMMUNIZATION AT PUBLIC EXPENSE

K.S.A. 72-5210. Same; duties of public health departments and officers; fees, exception to payment.

The county, city-county or multicounty health department shall provide without delay and to the extent that funds are available the tests and inoculations required by this act to such pupils as are not provided therewith by their parents or guardians and who have not been exempted on religious or medical grounds. Such tests and inoculations may be provided on a sliding fee scale for administrative charges with the exception that no child may be denied inoculations for inability to pay an administrative fee. The local health officer shall counsel and advise school boards concerning the administration of this act.

History: L. 1961, ch. 354, 3; L.1965, ch. 412, 2; 1978, ch. 291, 3; L. 1980, ch. 182, 30; L.1994, ch. 206, 2; July 1.





FORMS FOR IMMUNIZATION RECORDS

K.S.A. 72-5211. Same; duties of secretary; forms and certificates; regulations.

The secretary shall prescribe the content of forms and certificates to be used by school boards in carrying out this act and shall provide, without cost to the school boards, sufficient copies of this act for distribution to pupils. Schools shall utilize the reporting form adopted by the secretary for documentation of all immunizations. Audit information shall be obtained from this adopted form. The secretary may adopt such regulations as are necessary to carry out the provisions of this act.

History: L. 1961, ch. 354, 4; L. 1975, ch. 462, 108; L. 1978, ch. 291, 4; L. 1994, ch. 206, 3; July 1.



EXPULSION OF UNDER-IMMUNIZED PUPILS

K.S.A. 72-5211a. Exclusion of pupils from school attendance; adoption of policy; notice; hearing; compulsory attendance law not applicable.

- (a) The school board of every school affected by this act may exclude from school attendance, or by policy adopted by any such school board authorize any certificated employee or committee of certificated employees to exclude from school attendance, any pupil who has not complied with the requirements of K.S.A. 72-5209. A pupil shall be subject to exclusion from school attendance under this section until such time as the pupil shall have complied with the requirements of K.S.A. 72-5209. The policy shall include provisions for written notice to be given to the parent or guardian of the involved pupil. The notice shall (1) indicate the reason for the exclusion from school attendance, (2) state that the pupil shall continue to be excluded until the pupil has complied with the requirements of K.S.A. 72-5209, and (3) inform the parent or guardian that a hearing hereon shall be afforded the parent or guardian upon request therefor.
- (b) The provisions of K.S.A. 72-1111 do not apply to any pupil while subject to exclusion from school attendance under the provisions of this section.

History: L. 1978, ch. 291, 5; L. 1981, ch. 285, 2; July 1.



AIDS (Acquired Immunodeficiency Syndrome)



Signs and

Symptoms: Early signs of infection with the AIDS virus include fever, fatigue, lymph

node enlargement, weight loss, night sweats, and persistent diarrhea. In its final form the body's ability to resist infection is destroyed, and one or more secondary diseases, such as pneumonia, may develop. AIDS can

also cause direct destruction of nerve tissue (AIDS dementia).

Infectious Agent: Human Immunodeficiency Virus (HIV)

Mode of Spread: By sexual activity, by transfusion with contaminated blood or blood

products, by sharing contaminated needles or injection equipment, and

by perinatal transmission from mother to infant.

Incubation Period: Highly variable; the interval between infection and development of

recognizable illness may range from several weeks to more than ten years. The serologic tests can detect antibody (evidence of infection) as

early as two weeks, or as late as six months following exposure.

Period of

Communicability: Throughout life once infected

Control Measures: Advise students to abstain from sexual intercourse or always to use latex

condoms. Needles for injections should not be shared in any circumstances. AIDS is not spread by casual contact as occurs in classrooms and is not spread by coughs, sneezes, or food. Education about AIDS is critical for control efforts. Persons who understand how

AIDS is spread can protect themselves from this disease.



CAMPYLOBACTER

Signs and

Symptoms: Diarrhea, abdominal pain, fever, malaise, nausea and vomiting of

variable severity of usually 2 to 5 days duration.

Infectious Agent: Campylobacter jejuni, a bacterium

Mode of Spread: By ingestion of contaminated food, milk or water or by direct contact

with fecal material from infected animals or humans.

Incubation Period: 3 to 5 days, with a range from 1-10 days

Period of

Communicability: Throughout the course of infection; usually from several days to several

weeks.

Control Measures: Emphasize proper food handling. Symptomatic individuals should be

excluded from food handling. Pasteurize all milk and chlorinate all water supplies. Stress hand washing after toileting and prior to food handling. Children can return to school after diarrhea has resolved.

CHICKENPOX (Varicella)



Signs and Syptoms:

Fever and fatigue followed by rash. Rash is generalized and pruritic. The rash rapidly progresses from macules to papules and then to pustules before crusting. Several crops of the vesicles will develop over a period of 2 to 4 days with lesions presenting in several stages of development. Complications may occur, particularly bacterial infection of the lesions.

Infectious Agent: Varicella-Zoster virus

Mode of Spread: From person to person by direct contact, droplet or airborne spread of

respiratory tract secretions; indirectly through articles freshly

contaminated with secretions from infected persons.

Incubation Period: 10 to 21 days, usually 14 to 16 days after exposure.

Period of

Communicability: From 1 to 2 days before the rash appears until lesions have formed scabs

or crusts (usually 5 days after rash onset).

Control Measures: Immunization is the best method for prevention of varicella. On April 15,

2004 Kansas implemented a school requirement for varicella. As of the 2004-2005 school year, all children entering kindergarten are required to have varicella vaccine, a history of chickenpox, or an exemption to

vaccination in order to attend school.

Students with chickenpox should be excluded from school until all lesions have formed scabs or crusts (usually 5 days after rash onset). Consider exclusion of exposed persons with a suspected rash illness

pending physician evaluation.

Vaccine may be recommended for non-immune contacts of a varicella case to provide protection from future exposure. For unvaccinated persons, Varicella Zoster Immune Globulin (VZIG) can be given to susceptible individuals upon a

physician's prescription if they are at high risk of

developing complications from chickenpox. Because the varicella vaccine requirement is recent and only required for kindergarten entrance exclusion of non-immune contacts from the classroom is not required at this time. Exclusion may be recommended on a case by case basis until all the children in a school are required to be vaccinated.



CHLAMYDIA

Signs and Symptoms:

Inflammation of the urethra in males and of the cervix in females. Without laboratory examination this infection is very difficult to distinguish from gonorrhea. An opaque discharge of moderate or scanty quantity, and burning on urination may be present. Infection may be

asymptomatic. The primary infection may lead to Pelvic Inflammatory

Disease (PID) in females.

Infectious Agent: Chlamydia trachomatis, a bacterium

Mode of Spread: Through sexual activity; infants may become infected during birth.

Incubation Period: Poorly defined, probably 7-14 days or longer

Period of

Communicability: Unknown

Control Measures: Chlamydia infections frequently coexist with gonococcal infections.

Treatment of both is recommended when one is suspected. Treatment and reporting to health authorities of all cases and examination and treatment of all sex partners of cases during period of communicability is important. Special emphasis is placed on identifying and treating infected

females who are free of symptoms. Public education includes

recognition of disease and awareness of modes of transmission. The disease responds readily to adequate treatment with an appropriate antibiotic. Teenagers should be reminded that in accordance with Kansas statutes, examination and treatment of sexually transmitted

diseases by a physician does not require parental consent.

CONJUNCTIVITIS, BACTERIAL (Pink-eye)

Signs and

Symptoms: Inflammation of the conjunctiva of one or both eyes, swelling of the

eyelids, and a purulent discharge. Inflammation of the conjunctivae without purulent discharge is most commonly due to viral infection and is

not "pink eye".

Infectious Agent: Various bacterium, chiefly *Haemophilus influenzae* and *Streptococcus*

pneumoniae.

Mode of Spread: By contact with discharges from eyes or upper respiratory tract of infected

persons, through contaminated fingers, clothing, or other articles.

Incubation Period: 1 to 3 days

Period of

Communicability: Throughout active infection

Control Measures: Infection responds readily to antibiotic

ment. Cases should be excluded from school until 24 hours after treatment has been initiated. Children should be instructed to keep

hands away from eyes and to wash hands thoroughly.

Viral conjunctivitis which is usually associated with upper respiratory and intestinal infections, is most often transmitted by the respiratory route. This type of conjunctivitis is usually not purulent and can usually be

managed without exclusion from school.





treat

DIPHTHERIA



Signs and

Symptoms: Low grade fever and sore throat with a dirty appearing gray membrane

occurring in the nose, throat, or tonsillar areas.

Infectious Agent: Corynebacterium diphtheriae, a bacterium

Mode of Spread: Contact with a case or carrier or, more rarely, with articles soiled by

discharges from lesions of infected person.

Incubation Period: Usually 2 to 5 days

Period of

Communicability: Variable; usually 2 weeks or less and seldom more than 4 weeks.

Control Measures: Diphtheria has been effectively controlled by immunization. Following a

primary series of DTaP/DTP vaccine in childhood, booster doses of tetanus-diphtheria (Td) vaccine should be given every 10 years.

Isolate infected persons for 14 days or until two cultures from both nose and throat (and skin in cutaneous diphtheria) taken at least 24 hours apart, and not less than 24 hours after cessation of antimicrobial therapy, are negative. Culture close contacts, observe for 7 days, and administer appropriate antibiotics. Immunized contacts should receive a booster dose of diphtheria toxoid. Initiate the primary series in nonimmunized contacts using Td, DT, DtaP/DTP, or DTP-Hib vaccine depending on age.

E. COLI 0157:H7

Signs and

Symptoms: Diarrhea, often bloody. Complications of infection include the hemolytic-

uremic syndrome (HUS).

Infectious Agent: Escherichia coli O157:H7, a bacterium

Mode of Spread: Usually through contaminated food, often beef that has been poorly

cooked or contaminated produce; also through person-to-person

transmission.

Incubation Period: Usually 3-4 days, but can extend to 10 days.

Period of

Communicability: For duration of fecal excretion of the organism, which is usually short.

Control Measures: Infected individuals should be excluded from school until the diarrhea

has resolved. In school-based outbreaks of *E.coli* O157:H7, an ill child should not be allowed to reenter their room until diarrhea has stopped and two stool cultures are negative for E.coli O157:H7. Prevention, in part, is dependent on proper food handling practices. Infected individuals should not be employed to handle food until they have had 2 successive, negative fecal samples obtained 24 hours apart and no sooner than 48

hours after discontinuation of antibiotics.

FIFTH DISEASE (Erythema Infectiosum)

Signs and

Symptoms: Fifth Disease is characterized by a distinctive red rash. On the face, the

rash is intensely red with a "slapped cheek" appearance and circumoral pallor. The fetus can be adversely affected by maternal infection in the

first half of pregnancy.

Infectious Agent: Parvovirus Bl9

Mode of Spread: Primarily through contact with infected respiratory secretions.

Incubation Period: Usually 4-14 days, but can be as long as 21 days.

Period of

Communicability: Greatest before onset of rash; probably not communicable after rash

onset.

Control Measures: Promote routine hygienic practices for the control of respiratory

infections, which include hand washing and disposal of facial tissues containing respiratory secretions. Children with Fifth Disease do not need to be excluded from school as they are usually not infectious after rash onset. Exclusion of pregnant women from the workplace where Fifth Disease is occurring is not recommended. Pregnant women exposed to Fifth Disease should consult with their doctor. Serologic testing for

parvovirus B19 antibody is available.

GIARDIASIS

Signs and

Symptoms: Diarrhea, abdominal cramps, bloating, frequent loose and pale greasy

stools, fatigue, and weight loss. Often asymptomatic.

Infections Agent: Giardia lamblia, a protozoan

Mode of Spread: Primarily by hand-to-mouth transfer of feces from infected person; may

also occur by ingestion of contaminated water or food.

Incubation Period: median 7 to 10 days; range is 1 to 4 days weeks.

Period of

Communicability: Entire period of infection which is highly variable

Control Measures: Exclude children with diarrhea from school until 24 hours after they are

asymptomatic. Emphasize personal hygiene, particularly hand washing. Treatment of asymptomatic carriers not recommended because the

resulting benefits and risks have not been established.



GONORRHEA

Signs and

Symptoms: In males, painful inflammation of the urethra and a thick yellow

discharge; infection may extend to testes and prostate gland. In females,

the cervix or urethra is most often infected followed by pelvic

inflammatory disease and chronic infection. Oral and rectal infections

are also common. Gonorrhea may be asymptomatic.

Infectious Agent: Neisseria gonorrhoea, a bacterium

Mode of Spread: By intimate and direct sexual contact or intrapartum to infants born to

infected mothers.

Incubation Period: Usually 2-7 days, sometimes longer

Period of

Communicability: May extend for months in untreated individuals. Adequate treatment

usually ends communicability, often within hours.

Control Measures: Treatment and reporting to health authorities of all cases and

examination and treatment of all sexual contacts of cases during period of communicability are keys to controlling gonorrhea. Special emphasis is placed on identifying and treating infected asymptomatic females. Public education includes recognition of disease and awareness of mode of transmission. The disease responds readily to adequate treatment with an appropriate antibiotic. Teenagers should be encouraged to seek medical care, even if symptoms subside. They should be reminded that in accordance with Kansas statutes examination and treatment of sexually transmitted diseases by a physician does not require parental

consent.

HAND, FOOT AND MOUTH SYNDROME (Vesicular stomatitis)

Signs and

Symptoms: Fever, sores in mouth, and rash on hands and feet.

Infectious Agent: Enterovirus, especially Coxsackie A16

Mode of Spread: By direct contact with nose and throat discharges and feces of cases and

by aerosol droplet spread.

Incubation Period: 3 to 6 days

Period of

Communicability: During acute stage and perhaps longer

Control Measures: Proper hand washing should be taught with emphasis on hand washing

after toileting. Personal hygiene and avoiding overcrowding will reduce disease spread. Children with oral temperatures of 101EF or greater and

rash should be excluded from school until asymptomatic.

HEPATITIS A

Signs and

Symptoms: Acute illness with fever, jaundice, malaise, loss of appetite, nausea, and

abdominal pain.

Infectious Agent: Hepatitis A Virus (HAV)

Mode of Spread: Chiefly by person-to-person contact, resulting from fecal contamination

and oral ingestion.

Incubation Period: 15 to 50 days, with an average of 25 to 30 days.

Period of

Communicability: During the latter half of the incubation period, continuing until 1 week

after the onset of jaundice.

Control Measures: Cases should be excluded from school for 1 week following onset of

illness. However, food handlers with hepatitis A should be restricted from food handling until 2 weeks after the onset of symptoms. Thorough hand washing after use of the toilet and before meals is essential. Immune Globulin (IG) is recommended to provide temporary protection to close contacts of cases. A hepatitis A vaccine is licensed for use, but is only recommended for groups at higher risk of infection, such as international

travelers.



HEPATITIS B



Signs and

Symptoms: Slow onset of lack of appetite, abdominal discomfort, nausea, vomiting,

and jaundice. May be asymptomatic.

Infectious Agent: Hepatitis B Virus (HBV)

Mode of Spread: Through sexual contact, sharing needles and perinatal transmission from

mother to infant.

Incubation Period: Usually 45-180 days, average 60-90 days

Period of

Communicability: Variable; chronic carriers are infectious for life.

Control Measures: Immunization is the best method for control of hepatitis B. Hepatitis B

Immune Globulin (HBIG) can also be used to provide protection following exposure. On April 15, 2004 Kansas implemented a school requirement for hepatitis B. As of the 2004-2005 school year, all children entering kindergarten are required to have hepatitis B vaccine, proof of immunity, or an exemption to vaccination in order to attend school.

Children who are acutely or chronically infected should not be excluded from school or athletic activities. Universal precautions is an infection control approach requiring that all human blood or other potentially infectious material be treated as if they were known to be infectious for HBV, hepatitis C, HIV or other blood borne pathogens. Use universal precautions when handling blood and certain other body fluids.

HEPATITIS C

Signs and

Symptoms: Slow onset of lack of appetite, abdominal discomfort, nausea, vomiting,

and jaundice. May be asymptomatic.

Infectious Agent: Hepatitis C Virus (HCV)

Mode of Spread: Usually by percutaneous exposure to contaminated blood (i.e., sharing

needles); in the past, hepatitis C often resulted from blood transfusion.

Incubation Period: From 2 weeks to 6 months, usually 6 to 9 weeks.

Period of

Communicability: Variable; chronic carriers are infectious for life.

Control Measures: Use universal precautions. Avoid injecting drug use. Over three-quarters

of infected individuals become chronic carriers of hepatitis C. Children who are acutely or chronically infected should not be excluded from

school or athletic activities.

HERPES

Signs and

Symptoms: Clear vesicles (sores) appear as blisters, crust and heal. These vesicles

may represent primary infection or reactivation of a latent infection. The

lesions are usually painful and itch.

Infectious Agent: Herpes simplex virus (HSV)

Mode of Spread: By contact with virus in saliva, on hands or through sexual contact. Skin

lesions associated with Herpes simplex virus among wrestlers are usually

the result of exposure from herpetic lesions of another wrestler.

Incubation Period: 2 to 12 days

Period of

Communicability: Variable depending on whether infection is primary or recurrent;

asymptomatic shedding is probably common.

Control Measures: Exclusion of students with "cold sores" is not indicated. Emphasize hand

washing. Teenagers with genital herpes should be encouraged to seek medical care. They should be reminded that in accordance with Kansas statutes, examination and treatment of sexually transmitted diseases by a physician does not require parental consent. To prevent transmission among wrestlers, wrestlers with open herpetic lesions should be

excluded from wrestling even if under treatment. However, clearance to wrestle can be given five days after the lesions are dried or crusted.



INFLUENZA (Flu)



Signs and

Symptoms: Abrupt onset of fever, headache, muscle aches, cough and malaise

lasting 2 to 7 days; often occurs in epidemics during the winter months.

Infectious Agent: Influenza virus

Mode of Spread: Airborne spread and by direct contact through droplet spread.

Incubation Period: Usually 1 to 5 days

Period of

Communicability: 3 to 7 days from onset of illness

Control Measures: Immunization is recommended for groups at high-risk from

complications of influenza, such as children with asthma or diabetes. Antiviral drugs can be used for prophylaxis and treatment of influenza A. Students should be taught about importance of hand washing and

covering nose and mouth when sneezing and coughing.





LICE (Pediculosis)

Signs and

Symptoms: Severe itching which may result in secondary bacterial infection from

scratching.

Infectious Agent: Pediculus capitis - the head louse

Pediculus corporis - the body louse *Pthirus pubis* - the pubic or crab louse

Mode of Spread: By direct contact with an infested person, or with their combs, brushes,

clothing, or caps. Mattresses, bed clothing, and fabric-covered furniture

may become infested.

Incubation Period: Eggs hatch within 1 week and reach maturity in approximately 8-10 days.

Period of

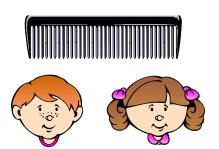
Communicability: As long as lice or eggs remain alive on the infested person or in clothing.

Control Measures: Cases should be excluded from school until treatment has been initiated

and nits are removed. Nits can be removed by hand and with a

fine-toothed comb. Toilet articles and headgear should not be shared. Close contacts may need prophylactic treatment. Reinfestations are common. Clothing, bedding, or cloth toys should be laundered or stored

in plastic bags for 10 days to kill lice and eggs.



MEASLES (Rubeola)



Signs and

Symptoms: Fever, cough, watery discharge from eyes and nose, red blotchy rash first

appearing on the face, then becoming generalized.

Infectious Agent: Measles virus

Mode of Spread: Airborne by droplet spread or direct contact with respiratory secretions.

Incubation Period: Most commonly 10 days; rash usually develops 14 days after exposure.

Period of

Communicability: Patients are contagious from 1 to 2 days before onset of symptoms (3 to 5

days before the rash) to 4 days after the rash appears.

Control Measures: Control of measles is dependent upon immunization with a measles-

containing vaccine (MMR). Cases should be excluded from school until at least 4 days after the onset of rash. If a case of measles occurs in a school, persons who cannot provide documentation of measles immunity, and who are not vaccinated within 72 hours of exposure, should be excluded until at least 2 weeks after the onset of rash in the last case of measles. Measles has been a very rare occurrence in Kansas in the past five year.

Every case of suspect measles should be reported immediately by

telephone to the local health department.

MENINGITIS, HAEMOPHILUS



Signs and

Symptoms: Fever, headache, stiff neck, lethargy, and change in mental status.

Infectious Agent: Haemophilus influenzae, type b

Mode of Spread: By droplet infection and discharges from nose and throat.

Incubation Period: Unknown, but probably 2 to 4 days

Period of

Communicability: 24 to 48 hours after starting treatment

Control Measures: Immunization is the best method for control of Haemophilus meningitis.

Preventive antibiotics may be prescribed for close contacts of known

cases.

MENINGITIS, MENINGOCOCCAL

Signs and

Symptoms: Fever, headache, nausea, vomiting, stiff neck, and frequently a rash.

Unrecognized infections occur and most carriers of Neisseria meningitidis remain healthy. When disease develops, however, it can be rapidly fatal.

Infectious Agent: Neisseria meningitidis, a bacterium

Mode of Spread: From person to person by direct contact, including respiratory droplets

from nose and throat of infected persons.

Incubation Period: From 2 to 10 days, commonly 3 to 4 days

Period of

Communicability: Patients can transmit infection until approximately 24

urs after initiation of effective treatment.

Control Measures: Health education is needed regarding personal hygiene and avoidance of

overcrowding in schools, work places, and camps, especially sleeping areas. Preventive antibiotics may be prescribed for close contacts of cases. Examples of close contacts include household contacts and individuals with direct exposure to the patient's secretions through kissing or sharing tooth brushes or eating utensils. Preventive antibiotic treatment is unnecessary for staff and schoolmates who did not have the close contact described above. Immunization with the meningococcal vaccine

can be done in outbreak settings.



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MONONUCLEOSIS, INFECTIOUS

Signs and

Symptoms: Fever, malaise, sore throat, and lymph node enlargement. Most cases are

mild; however, weakness and a tired feeling may persist for weeks or

months.

Infectious Agent: Epstein-Barr (EB) virus

Mode of Spread: Person-to-person spread by the oropharyngeal route via saliva.

Incubation Period: 4 to 6 weeks

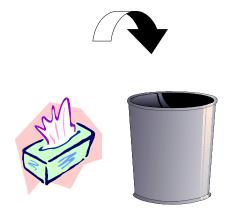
Period of

Communicability: Prolonged; pharyngeal excretion may persist for a year or more after

infection.

Control Measures: Students should be taught to dispose of tissues properly and to wash

hands after coughing and sneezing.



MUMPS



Signs and Symptoms:

Fever and swelling of one or more of the salivary glands. Inapparent infections occur. The infection may be complicated, particularly in males

past puberty, by involvement of the testes (orchitis).

Infectious Agent: Mumps virus

Mode of Spread: From person to person by direct contact or droplet spread (coughs and

sneezes).

Incubation Period: 12 to 25 days, commonly 18 days

Period of

Communicability: From 6 to 7 days before the onset of illness until 9 days after.

Control Measures: Immunization is the best method for prevention of mumps. Mumps cases

should be excluded from school until 9 days after the onset of parotitis if susceptible contacts are present. To control mumps outbreaks, consider excluding susceptible (nonimmunized) students from affected schools. Excluded students can be readmitted immediately after vaccination.

PERTUSSIS (Whooping Cough)



Signs and

Symptoms: Cough illness lasting at least 2 weeks with one of the following:

paroxysms of coughing, inspiratory "whoop", or post-tussive vomiting.

Infectious Agent: Bordetella pertussis, a bacterium

Mode of Spread: Direct contact with nose and throat discharges of cases.

Incubation Period: 7 to 10 days, not exceeding 21 days

Period of

Communicability: Throughout the incubation period and for approximately 3 weeks

following onset of illness if untreated. If treated, infectiousness usually

extends 5 days or less after onset of therapy.

Control Measures: Students and staff with pertussis should be excluded until they have

received 5 days of appropriate antibiotic treatment. Consider exclusion of

exposed persons with a suspect cough illness, pending physician

evaluation.

Immunization status of children younger than 7 should be reviewed and vaccine given, if indicated. Prophylactic antibiotics are recommended for household and close contacts of pertussis patients, irrespective of immunization status. Immunization, beginning in infancy, greatly

decreases incidence and severity of illness.



PINWORMS

Signs and

Symptoms: Frequently asymptomatic; more severe infestations may result in

irritability and itching of perianal area with irritation from scratching.

Infectious Agent: Enterobius vermicularis, an intestinal round worm.

Mode of Spread: Infective eggs directly transmitted from person-to-person by hands

contaminated with fecal material and indirectly transmitted by

contaminated clothing, bedding, and food.

Incubation Period: The life cycle of the pinworm is 2 to 6 weeks.

Period of

Communicability: As long as worms are laying eggs: eggs remain infective in an indoor

environment for approximately 2 weeks.

Control Measures: Drug treatment is safe and effective in eliminating infection. All members

of a household may need to be treated simultaneously. Rate of

reinfection can be high. Encourage daily showers, proper hand washing, frequent changes and washing of underwear, night clothing, and bed

linens. Discourage nail biting and scratching of anal area.

POLIOMYELITIS



Signs and

Symptoms: Acute viral illness with severity ranging from inapparent infection to

paralysis and death.

Infectious Agent: Poliovirus

Mode of Spread: Most commonly by direct contact with oral secretions or feces of infected

persons.

Incubation Period: 3 to 35 days, most commonly 7 to 14 days

Period of

Communicability: Not accurately known; cases are most infectious during the first few days

before and after onset of symptoms.

Control Measures: Immunization represents the only effective means of controlling

poliomyelitis. Immunization policy in the United States has changed to encourage use of inactivated polio vaccine (IPV) to decrease cases of

vaccine-associated polio.

RABIES



Signs and

Symptoms: A viral disease of the central nervous system that is uniformly fatal in

humans.

Infectious Agent: Rabies virus

Mode of Spread: Usually through the bite or scratch of an infected animal.

Incubation Period: Usually 2 to 8 weeks, occasionally as short as 5 days or as long as a year

or more.

Period of

Communicability: Varies by species; dogs and cats are considered infectious for up to 10

days before onset of illness.

Control Measures: Immunize all dogs and cats. Avoid contact with wildlife. Remove stray

and unwanted animals. Handle pets with care. Obtain medical care for all animal bites and scratches. When appropriately administered, human rabies vaccine and rabies immune globulin are safe and effective in

preventing disease in persons bitten by rabid animals.





RINGWORM (Tinea)

Signs and

Symptoms: Tinea Capitis:scaly patches of baldness on the head

Tinea Corporis: flat, spreading ring-shaped lesions on the body

Tinea Pedis: scaling or cracking of the skin, especially between the toes,

"athlete's foot."

Tinea Unguium: one or more nails of the hand or foot gradually thicken, become discolored and brittle, or may become chalky and disintegrate.

Infectious Agent: Various species of Microsporum or Trichophyton which are fungi.

Mode of Spread: Direct skin-to-skin contact or indirect contact with contaminated items.

Animals may also be infected.

Incubation Period: 10 to 14 days for ringworm of the scalp; 4-10 days for ringworm of the

body; unknown for ringworm of the nails and feet.

Period of

Communicability: As long as lesions are present

Control Measures: Specific treatment with fungicidal agents is available. Cases may attend

school if receiving treatment, but should not participate in athletic activities involving skin-to-skin contact until skin lesions are completely

healed.



RUBELLA (German measles)



Signs and

Symptoms: Rubella is usually a mild rash illness with fever. However, the rate of birth

defects is extremely high when this disease is developed by expectant

mothers, particularly during the first months of pregnancy.

Infectious Agent: Rubella virus

Mode of Spread: From person to person by nasopharyngeal secretions of infected persons.

Incubation Period: From 14 to 23 days, usually 16-18 days

Period of

Communicability: From about 1 week before to at least 4 days after onset of rash.

Control Measures: Cases should be excluded from school until 7 days after the rash appears.

Optimum control of rubella is dependent upon immunization of all

children.

SALMONELLOSIS

Signs and

Symptoms: Abdominal pain, diarrhea, and fever.

Infectious Agent: Salmonella, a bacterium

Mode of Spread: Usually by ingestion of food from infected animals or contaminated by

feces of an infected animal or person.

Incubation Period: 6 to 72 hours, usually 12 to 36 hours

Period of

Communicability: Throughout the duration of infection, usually several days to weeks.

Control Measures: Personal hygiene (i.e., hand washing), good food handling practices, and

thorough cooking of all foods derived from animal sources are important. Person-to-person transmission within the classroom is not likely, and children who experience salmonella gastroenteritis may return to school

as soon as they are asymptomatic. For non-typhoidal salmonella

infections, food handlers with diarrhea should be excluded until they are no longer symptomatic. Convalescent infected persons without diarrhea may be excluded from, and return to, such work by order of the local

health officer.

SCABIES

Signs and

Symptoms: Skin eruption accompanied by intense itching

Infectious Agent: Sarcoptes scabiei, a mite

Mode of Spread: By direct contact with infected person, clothing, or bedding.

Incubation Period: 1 to 4 days for persons who have been previously infected; 2 to 6 weeks

for persons without previous exposure.

Period of

Communicability: Until the mites and eggs are destroyed by treatment.

Control Measures: Cases should be excluded from school until appropriate treatment has

begun. Clothing worn next to the skin and bedding should be laundered. Prophylactic therapy is often recommended for household members. The parasites do not survive more than 3 to 4 days without contact with

the skin. Environmental disinfection is not usually indicated.

SHIGELLOSIS



Signs and

Symptoms: Diarrhea, intestinal cramps, and fever

Infectious Agent: Shigella, a bacterium

Mode of Spread: Feces of infected humans are the source. No animal reservoir is known.

Fecal-oral transmission from person-to-person contact is the common route by which children are infected. Other modes of transmission include ingestion of contaminated food or water, sexual transmission and

contact with a contaminated, inanimate object.

Incubation Period: Varies from 1 to 7 days, is usually 2 to 4 days.

Period of

Communicability: During acute illness and until the organism is no longer present in the

feces. Convalescent carriage usually ceases within 4 weeks of onset of

illness.

Control Measures: Personal hygiene (i.e., hand washing) and good food handling practices

are essential. Person-to-person transmission may occur within families,

but is less likely to occur in classrooms. Exclusion from school is

recommended for duration of acute symptoms. Infected food handlers may not return to work until 2 negative stool cultures are obtained at least 24 hours apart and no sooner than 48 hours following discontinuation of

antibiotics.

SHINGLES (Herpes Zoster)

Signs and

Symptoms: Herpes zoster is the reactivation of the varicella-zoster virus in a person

with a history of chickenpox (varicella). Grouped vesicular lesions appear in the distribution of one or more sensory nerve pathways. The lesions may itch and be painful in children. Adults generally have severe

deep pain, pruritus, and paresthesia or hyperesthesia.

Infectious Agent: Varicella-Zoster virus

Mode of Spread: Person-to-person spread occurs by direct contact with zoster lesions or,

rarely, by air-borne droplet infection. Transmission of infection to a

susceptible individual results in chickenpox, not shingles.

Incubation Period: Highly variable

Period of

Communicability: Patients with zoster may be infectious for 6 days after onset of lesions.

Control Measures: Children with active draining lesions should keep sores covered by

clothing or a dressing until lesions have crusted. Routine exclusion from school of children with shingles in not indicated, however if lesions cannot be covered, children should be excluded until lesions are dried

and crusted. Emphasize the importance of hand washing.

STAPHYLOCOCCAL INFECTIONS

Signs and

Symptoms: A variety of skin infections including impetigo, folliculitis, carbuncles,

furuncles, abscesses, and infected lacerations; most infections are uncomplicated but seeding of bloodstream can lead to severe illness.

Infectious Agent: Staphylococcus aureus, a bacterium

Mode of Spread: By contact with a person who has a purulent lesion or is an asymptomatic

carrier; hands are the most important means of disease transmission.

Incubation Period: Variable, but commonly 4 to 10 days

Period of

Communicability: As long as purulent lesions continue to drain or the carrier state persists.

Control Measures: Emphasize good personal hygiene and proper wound care. Children with

impetigo should be excluded from school until receiving medical

treatment. Open wounds should be covered with a clean dressing. Food handlers should be excluded from their occupation until purulent lesions

are healed.

STREPTOCOCCAL INFECTIONS, GROUP A

Signs and

Symptoms: Streptococcal sore throat and impetigo are the predominant illnesses

caused by streptococci. Characteristic symptoms of strep throat are fever,

sore throat, and swollen glands in the neck. Impetigo results from infection of the skin. Two major complications of streptococcal infections are acute glomerulonephritis and rheumatic fever.

Infectious Agent: Streptococcus pyogenes, a bacterium

Mode of Spread: By direct or intimate contact with cases or carriers, rarely by indirect

contact through objects or hands.

Incubation Period: 2 to 5 days for streptococcal pharyngitis and 7 to 10 days for development

of skin lesions.

Period of

Communicability: With adequate treatment, transmissibility is terminated in 24-48 hours; if

untreated, usually 10 to 21 days.

Control Measures: Adequate medical treatment of cases is essential for control of

streptococcal disease. Children with strep infections should be excluded from school until on treatment for at least 24 hours and afebrile. Educate persons to perform proper hand washing, to cover mouth while coughing,

and to dispose of used tissues properly.

SYPHILIS

Signs and

Symptoms: The disease has 4 stages: primary, secondary, latent, and late. The

primary stage is usually a painless, spontaneous-healing sore at the site of

infection. The secondary stage is typically a rash which resolves

spontaneously. In the latent stage, no outward symptoms may be present and it may last from weeks to years. The late stage, continuing throughout life, can cause destruction of bone, skin, heart, and central nervous

system.

Infectious Agent: Treponema pallidum, a spirochete

Mode of Spread: By intimate and direct sexual contact with an infected person, and by

prenatal or intrapartum transmission from mother to infant.

Incubation Period: 10 to 90 days, usually 21 days

Period of

Communicability: Variable and indefinite; most transmission takes place during the primary

and secondary stages. Adequate treatment ends communicability in 24 to

48 hours.

Control Measures: Treatment and reporting to health authorities of all cases and

examination and treatment of all sexual contacts of cases during period of communicability is important. Public education includes recognition of symptoms and awareness of mode of transmission. The disease responds readily to adequate treatment with an appropriate antibiotic. Teenagers should be reminded that in accordance with Kansas statutes examination and treatment of sexually transmitted disease by a physician

does not require parental consent.

TETANUS



Signs and Symptoms:

Painful muscular contractions, primarily of jaw and neck muscles. These

symptoms account for the common designation of this disease as

"lockjaw." Case fatality rates range from 30-90 percent.

Infectious Agent: Clostridium tetani, a bacterium

Mode of Spread: Usually through contaminated injuries, particularly puncture wounds.

Incubation Period: Usually 3-21 days, average 10 days

Period of

Communicability: Tetanus is not transmitted from person to person.

Control Measures: Adequate cleaning and disinfection of wounds is important.

Immunization represents the best method for prevention of tetanus. Following a primary series in childhood with DT or DTP/DTaP, tetanus-diphtheria (Td) booster doses are recommended at 10-year intervals. A booster dose is recommended after a tetanus-prone injury if the last

immunization was not within the preceding 5 year.



TUBERCULOSIS

Signs and

Symptoms: Cough, sputum production, night sweats, weight loss.

Infectious Agent: Mycobacterium tuberculosis, a bacterium

Mode of Spread: By airborne transmission of tubercle bacilli from pulmonary secretions of

active cases of pulmonary TB with positive bacteriology. Prolonged exposure in an enclosed environment is more likely to lead to infection than casual contact. Indirect contact through contaminated articles will not result in transmission of this disease. Infected (i.e., skin-positive) individuals without active pulmonary TB cannot transmit disease.

Incubation Period: Highly variable; the time period from infection to disease ranges from 4

weeks to years.

Period of

Communicability: Untreated or inadequately treated cases may be infectious for prolonged

periods. Adequate drug therapy usually terminates communicability

within weeks.

Control Measures: Isolation of active cases is required until sputum is negative by

microscopic examination or until patient has been on appropriate

chemotherapy for 2-3 weeks. School personnel must have

pre-employment tuberculin skin tests, chest x-rays, or both to protect children as well as themselves. Any individual who has been in close contact with an active case of tuberculosis should be medically evaluated. Persons who have positive skin tests, but no evidence of active disease, are not infectious and should not be excluded from

school.



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